



Section 4: Infrastructure Initiatives

Infrastructure Transitioning

VITA is investing in its infrastructure to provide foundational services to its customers, to prepare for consolidation of equipment and services, and to provide excellent customer service to existing and newly transitioned VITA customers.

The following pages provide information on VITA infrastructure initiatives, including base service improvements, telecommunications, and networking.

VITA Customer Care Center

Description and Benefits

A central customer service center for all agency IT related incidents, service orders and information is essential. The goals of the center are to have a single point of contact for all users, reduce the number of IT help desks in the Commonwealth, and have standard methods for reporting and completing incidents and service orders.

The VITA Customer Care Center (VCCC) brings immediate value through its ability to track incidents from initiation to closure. By trending and analyzing this single view into the Commonwealth's IT-related incidents, VITA will identify training opportunities, detect underlying infrastructure or applications weaknesses, and measure the impact of significant IT-related implementations.

A larger value is realized when the VCCC is able to "see" into its customer's network environments. This capability is highly dependent on implementation of the VITA Secure Network Project (VITANet), discussed below. With this secure network the VCCC can most effectively support and control the desktop environment.

Schedule and Costs Update

The VCCC opened for business on September 15, 2003. While further functionality continues to be added, VITA can respond to incidents from transitioned agencies and provide the needed services. VITA systems development and software licensing start-up costs are still projected at \$1,473,000. VITA and Virginia Department of Transportation (VDOT) personnel are working together to provide the needed services to agencies.



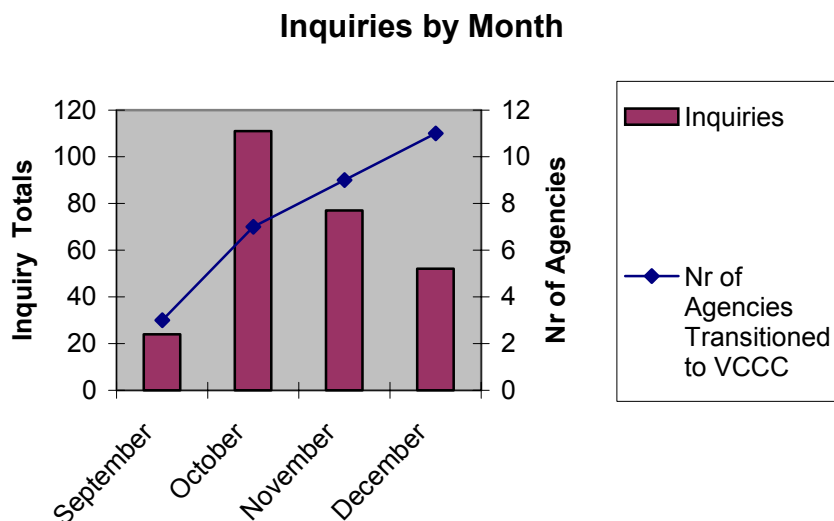
Section Highlights:

- *Foundational services in place, including VITA Customer Care Center and Agency Customer Contacts.*
- *The Centralized Monitoring project is underway.*
- *Base Service Improvements have occurred, with savings of more than \$12.5 million from the new COVANET contract.*
- *VITA's Data Center and COVANET are meeting or exceeding most performance metrics.*

Staffing

Initial staffing for the VCCC consists of help desk professionals from VDOT and VITA. As agency transition occurs, staff will be added to the VCCC as needed. VDOT partnered with VITA to provide project and management personnel to jump-start the project. More than 20 full time staff members currently support the VCCC. Half of these employees play a dual role, servicing VDOT employees and transitioned VITA agencies. Exhibit 4-1 shows the number of VCCC inquiries received between September 15 and December 19, 2003.

Exhibit 4-1
Number of VITA Customer Care Center Inquiries



*The 11 Cabinet Offices have dedicated support and are not reflected in this total.

For more information about the VCCC, please visit <http://www.vita.virginia.gov/vccc>.

Agency Customer Contact

Description & Benefits

VITA must establish and maintain close bonds with agencies to fulfill IT requirements and move the Commonwealth forward. This is essential to success in effectively transitioning the first wave of small agencies to VITA. In addition, as medium and large agencies migrate to VITA, it is required that VITA provide a conduit for continuous, positive working relationships with every agency. VITA will assign Enterprise Service Directors (ESDs) to each Secretariat to build these strong partnerships. The ESDs will optimize labor across their assigned areas to meet requisite performance measures. In addition, agencies will be assigned Service Level Directors (SLDs) who will work daily to ensure VITA is meeting the needs of agencies.

Schedule & Costs Update

VITA's Director of Customer Support Services came onboard July 16 and has assumed lead responsibility for building the VITA Customer Care Center. The schedule for filling out the remaining customer support leadership is currently as follows:

- **Acquire Small and Medium Agency Service Level Directors**
VDOT and VITA staffing have fulfilled this role during the transition period.
- **Acquire Enterprise Service Directors**
Recruitments are in process and scheduled for completion by January 2004 for seven Enterprise Service Level Directors.
- **Acquire Service Level Directors for Large Agencies**
January 2004 to January 2005.
- **Acquire an Associate Director to focus on Enterprise Desktop Management and VCCC services**
January 2004.

Staffing Update

VITA has maintained its commitment to the state IT workforce by providing technical resources through the use of existing state employees. This has taken place through posting of positions as state only or through the transfer or temporary assignment of individuals from state agencies.

VITA Information Center (VIC) Centralized System Monitoring Project

Description and Benefits

VITA will be establishing standard processes and implementing standard tools for managing the infrastructure and monitoring systems centrally. This will set the stage to cross-train employees to support multiple agencies, allow remote monitoring and controlling of systems to reduce staff time on processes, and result in increased availability by having system operations monitored 24x7. These tools are the foundation to monitor and report on service levels at the device level.

The Cisco Information Center is the product chosen to support the foundation for monitoring and managing all devices under the responsibility of VITA. The system not only provides asset tracking but also collects critical information used in determining the service levels for individual devices and complete services for customers. Reporting and tracking service levels has been a cornerstone of the VITA initiative. This system will also allow the VITA organization to manage and monitor services remotely, thus allowing fewer technical staff in fewer locations in the future. Without this system, VITA will not be able to report accurately or to the level of detail required by the service levels expected by agencies. In addition, staff will have to continue to be deployed in numerous locations around the state to monitor and manage equipment and services at agency locations.

Schedule and Costs

The total estimated cost of the project is \$4,373,619. FY 04 funds totaling \$3.3 million are available for the first two project phases. Phase One, funded at \$2,617,000, delivers all of the major functional requirements of the core system and sufficient software licenses to

cover all of the small agencies. The project was initiated on September 29, 2003. Phase One completion is planned for February 16, 2004.

Phase Two will provide software licensing, hardware, maintenance, support and training sufficient to implement system monitoring in the medium agencies. The cost for Phase Two of the project is \$650,419.

Phase Three of the project, estimated at \$1 million, will cover the costs to bring in the large agencies. Alternative FY 05 funding sources are being considered for this phase.

Staffing Update

VITA will use consulting services to implement the initial system and then develop internal staff to maintain support, incorporating state employees already at the agencies. With this approach no new costs will be attributed to the Commonwealth. Openings may be filled via posting of positions as state only or through the transferring of individuals as agencies transition to VITA.

Dependencies and Risks

The success of the VIC project is highly dependent on implementation of the VITA Secure Network Project (VITANet), discussed below. VITA's ability to centrally manage and monitor devices depends on its ability to "see" into its customers' network environments. VITANet is essential to providing this capability on a secured network.

VITA Secure Network Project (VITANet)

Description and Benefits

Network security is the foundation for VITA to provide reliable and secure environments for all agencies in the Commonwealth. Currently, agencies' networks are not standardized and vary in their vulnerability to threats of all kinds. This variability leads to the Commonwealth's inability to move toward major consolidations to support citizen services such as a single e-mail system, standard directories, and other consolidations of enterprise systems.

In addition, the administration of networks in the current, decentralized manner is highly duplicative and costly. By establishing a centrally managed, secure network infrastructure the Commonwealth will accomplish the following:

- Reduce the risks and vulnerabilities to security threats by having a standard secure infrastructure for all agencies;
- Reduce the current resource drain in managing and administering many separate networks with many different configurations; and
- Enable the Commonwealth to build statewide-centralized application services for e-mail directories required to support enterprise systems.

Without an initial investment in a secure network environment, the VITA organization will bear the risks of network vulnerabilities in the current environment and the Commonwealth will be stalled in its efforts to use technical resources efficiently and move forward with its

consolidation efforts. VITANet is a requirement to complete the remote monitoring of services.

Schedule and Costs Update

Finalization of the schedule and costs for this project are dependent upon funding approvals that are still pending. Estimated time to completion is 150 days from funding approval. Hardware and software start-up and support costs for the new core network, including provisions for disaster recovery, are currently estimated at \$2.7 million.

Staffing

VITA will be using existing state employees and contract staff to support this function. Openings may be filled via posting of positions as state only or through the transfer of individuals as agencies transition to VITA.

Additional Projects for VITA Planning and Implementation

The following projects have also been identified as important to IT consolidation efforts in terms of cost savings and/or enterprise-wide service improvements. More detailed information on these initiatives will be reported in future VITA Quarterly Reports.

- Data center back up, consolidation of data centers, and server consolidation;
- Unified e-mail;
- Statewide desktop support;
- Web accessibility standards;
- Centralized directory services; and
- Security notifications and alerts.

Base Service Improvements

VITA continues to provide additional services and service improvements even during the transition process. Activities relating to existing services that improve efficiencies of existing services or reduce costs now and in the future are identified and acted upon in a timely manner. Below are highlights of service improvements that have been completed or are substantially underway.

New COVANET Contract

Description

VITA recently completed the procurement to replace existing Long Distance and Data Networking services with a new contract. After competitive negotiations, the contract was awarded to MCI, the incumbent provider. The new COVANET contract was effective as of

November 7, 2003 and resulted in immediate savings to the Commonwealth, with \$12.5 million in savings over four years. The contract term is for four years, with six optional one-year renewals.

Accomplishments

VITA created a flexible four-year contract with up to six one-year renewals that will take the Commonwealth to a converged data and voice network in a planned and cost-effective manner. Features of the new contract are:

1. Significant cost reductions in core data network services and voice services.

- Immediate savings of \$3.13 million or 11.21 percent per year upon contract execution;
- \$12.5 million savings over the four-year term of the contract;
- Reduced rates for Frame Relay and ATM data network services (core data network services);
- Reduces rates for Outbound Long Distance calling within the Commonwealth, domestic, and international calling;
- Reduced rates for Inbound 800 services, Automatic Call Routing and Interactive Voice Response services;
- Free dedicated access T1's for Centrex's and PBXs, with four-year cost avoidance of \$1.67 million;
- No installation costs for all data and voice services that remain in place for at least 12 months; and
- Simplified "other fees and charges" to reduce the number of ongoing billing issues and disputed invoices.

2. A path for transitioning to new technologies.

- Provides new Private IP Intranet network services that are available at contract signing and can assist VITA in achieving a simpler, more cost-effective Commonwealth enterprise network design;
- Access to Internet II through MCI's VBNS+ network;
- Converged Data and Voice Networking;
- IP Version 6 support;
- Multicast services; and
- Fixed-Dish Satellite-based Internet access for remote locations.

3. Improved Richmond-based network monitoring and management services.

4. Improved installation intervals for most services.

5. Improved Service Level Agreements with credits for not achieving objectives.

See *Appendix 4-1: Telecommunications Services Available under the New COVANET Contract* for a complete list of services provided under this contract.

Telephone Inventory Services

Description

VITA has developed a Telephone Inventory contract with Asyncrob and Associates, Inc., to provide an inventory service for voice services. The business partner will compare VITA and telecommunication provider bills to ensure the Commonwealth is receiving what it pays for. If the pilot is successful, the partner will "touch" each voice line of the "in-scope" agencies to ensure all features are operational and necessary. Unused lines will be disconnected. The partner will make recommendations for cost-savings improvements to agency configurations (consistent with overall state telecommunications plans). The objective is to update the inventory, correct errors, and identify ways of saving money.

Milestones

This contract has been awarded, pilot agencies have been selected, and a protocol has been developed. Pilot projects are anticipated to begin shortly.

Mobile Satellite Service Internet Services

Description

VITA has established a contract with GROUND CONTROL for mobile and fixed satellite Internet-access services. This service can serve as a backup for land-based wired or terrestrial wireless data capacities. A state vehicle can be fitted with a portable satellite dish, data equipment, and services. For on-site emergency data applications, the vehicle can be driven to a site and uplink vital data to a satellite for rebroadcast to other locations. In the event of a disaster or emergency, locations with fixed satellite services have a backup link to disseminate information. If traditional land-based wired or terrestrial wireless data facilities are compromised, this capacity can be used to access the Internet or other information distribution networks.

Access to these facilities will provide data applications throughout the Commonwealth by either mobile or fixed means to provide a variety of administrative and emergency response resources. Applications will include mobile medical facilities, emergency operations, and temporary facilities such as VDOT construction sites. Known requests/requirements are from the Department of Health and the Department of Emergency Management. This service could also serve as Internet access to traditionally under-served areas (such as rural, valley areas).

Accomplishments

Potential savings are unknown, but this capability will be invaluable in emergencies where traditional communication modes are compromised. Also, for services that require access to state IT applications, the mobile service can enable service delivery to citizens at remote locations while avoiding expensive investments in permanent infrastructure at multiple sites.

Milestones

The contract became effective September 8, 2003. The contract term is two years with three optional one-year renewals. Several agencies are interested in beginning projects using the mobile technology, but have not begun.

Streaming Video- Web casting Services

Description

VITA is in the process of reviewing bids on an RFP for streaming video services. Once awarded, this new service will provide a variety of Web streaming resources to state government. For example, citizens throughout the state could view events live or information can be archived for later retrieval. It can also be used for training and dissemination of any information, such as the Governor's State of the Commonwealth speech, or a major summit from a Virginia location or university.

Potential savings are unknown. However, it is anticipated that this contract will provide high quality, cost-effective Web casting and video streaming options to end users, making unnecessary the expense of building a permanent infrastructure. Information will thereby be more available to a larger number of citizens.

Milestones

The procurement is still in progress and should conclude in January 2004.

Nextel Contract Modification

Description

Nextel Commonwealth customers deal directly with Nextel for services and billing. VITA completed a modification to the current Nextel wireless contract to improve services.

Accomplishments

Potential savings are unknown. However, there are many potential uses and benefits of the new arrangement:

- All customer billings for Nextel service will be consolidated by VITA with the customer's VITA telecommunication bill. This will simplify billing and payment processes for the customer and provide VITA with an accurate summarization of the costs associated with these services. (There are approximately 1,600 plus units in service today.)
- The new agreement provides for 12 voice plans instead of the current five, providing customers with more cost-effective choices.
- Wireless data services have been added that can be used either with laptops or phones. This service can provide access to corporate data or email systems and should greatly enhance field staff productivity. The Nextel version of the Blackberry PDA device (IDEN wireless protocol-based) is now available, which adds to the Commonwealth's options for email access through wireless technologies.
- Nine of the plans add about \$5.00 more per plan, but they have unlimited direct connect minutes, long distance, voice mail and caller ID included. These plans also can share minutes with other users. As a result, VITA is expecting a net reduction in usage-based costs.
- There are three government plans that share minutes between telephone and direct connect and provide different levels of free night and weekend minutes.

- For an extra fee nationwide direct connect can be added. This feature provides two-way radio, push-to-talk capability on a national network.

Milestones

The contract modification was completed on October 17, 2003, making all new options available immediately. The conversion to VITA consolidated billing should be in effect in the next quarter.

Shared Unix Platform for the Commonwealth

VITA plans to acquire a Fujitsu PrimePower 1500 platform with partitioning features that will help in consolidating Solaris UNIX platforms and standardizing their management. The PrimePower 1500 is compatible with the Sun Solaris operating system and can support up to fifteen domains or separate Solaris operating system images.

Initially, the new platform will run seven domains for central system and network monitoring software modules that require separate dedicated servers or domains. In order to minimize the number of Oracle licenses needed, there will also be a domain for consolidating VITA Oracle applications such as those used for the VITA Customer Care Center and VITA Information Center. The benefits of this approach over seven smaller dedicated servers include greater flexibility in allocating capacity resources, increased hardware redundancy features, 40 percent lower floor space requirements, and the ability to add up to seven more domains in the same footprint by adding processors and memory.

Console management and remote console access can be simplified by sharing consoles with another PrimePower 1500 supporting Department of Social Services applications. Longer-term, domains on the two PrimePower models could be repositioned so that a Solaris domain could fail over to a domain on a separate physical platform and thereby improve application availability.

Statewide Storage, Media, and PC Printer/Accessories Contracts

Assisted by Silver Oak Solutions, VITA coordinated input from universities, municipalities, and agencies to determine statewide requirements for storage media. VITA is currently evaluating bids on a Request for Proposals (RFP) to establish a statewide catalog contract for enterprise disk and tape storage devices. The scope of the RFP includes storage area networks, network attached storage, direct attached storage for mainframes and large servers, tape systems, and automated tape libraries. The goals of the RFP are to achieve lower pricing by showing the aggregated statewide storage demand and to reduce the time and effort spent in acquiring storage hardware by having most items available by ordering from a contract.

VITA, again with assistance from Silver Oak, has also issued an Invitation for Qualification (IFQ) to pre-qualify storage media suppliers for online reverse-auctions to be held in January 2004. The IFQ responses will be used to evaluate suppliers selling media such as DLT, LTO, DDS, and AIT as well as other types that are used statewide. After responses to the IFQ are evaluated, suppliers deemed eligible and qualified will be invited to participate

in the online reverse-auctions. The results of the auctions will lead to statewide contracts for the most widely used media products.

As part of the Virginia Partners in Procurement program, a Request for Proposals has been sent to 22 potential suppliers of PC printers and accessories. Proposals have been received from 17 suppliers and evaluation and negotiations are expected to be completed in late January 2004. This category includes printers and other PC accessories and is estimated to include approximately \$28.7 million in spending across state agencies, institutions of higher education, and local governments. Price savings from leveraging across the Commonwealth are estimated in the range of 15 percent.

Infrastructure Quarterly Status

VITA has also instituted measures to ensure services remain at a high quality level. Metrics are essential to managing the process and ensuring excellent service delivery to customers. The current VITA Infrastructure Services Dashboard is shown in Exhibit 4-2.

Exhibit 4-2
Infrastructure Services Dashboard

Description	Target Period Jul – Sept 2003	Actual Period Jul-Sept 2003	Status
Production Mainframes (MVS & Unisys) Availability	99.9%	100.00%	Green
Production VITA Central Data Center Unix Server Availability	99.8%	99.76%	Yellow
Production VITA Central Data Center Windows Server Availability	99.8%	99.92%	Green
Availability of VITA-installed COVANET Circuits	99.9%	99.00%	Yellow

In this Dashboard, availability measures the percentage of time the production servers supporting the environment are available. VITA has met or exceeded nearly all service availability metrics. Scheduled maintenance and downtime is not included in the availability measurement. The above measurements only reflect the status of servers and systems at the VITA central data center or controlled by the VITA network staff. This does not include servers and networks at agency locations. These will be measured after the VIC and VITANet are installed and operational.